MODIS sensor Working Group (MsWG) Meeting Summary February 15, 2006

Attendance: Bill Barnes, Vincent Chiang, Gene Eplee, Gerhard Meister, Chris Moeller, Vincent Salomonson, Junqiang Sun,, Eric Vermote, Zhengming Wan, Brian Wenny, Aisheng Wu, Xiaobo Xie, Jack Xiong

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Scheduled Agenda

Item 1: Recent L1B LUT delivery

- Terra collection 4 forward update – V4.3.0.39 (Feb 13).
- Aqua collection 5 forward update – V5.0.7.8 (Feb 6).

Item 2: Instrument status

- Terra and Aqua MODIS are in normal operations.
- Terra FOT encountered a MDA2BITE failure on day 2006041 02:25 UTC over the SAA region in the night orbit, causing data loss in the previous orbit from 01:38:08 to 01:39:44 due to SSR full. See page 3.

Item 3: Calibration issues and tasks (Jack)

- Reporting the recent personal change in the MCST RSB calibration group.
- We are working on several issues, including
  - RSB RVS (today's discussion topic).
  - RSB sub-frame difference at very low radiance scene. Work in progress with Oceans group.
  - TEB a0/a2 review with Chris.
  - Detector-to-detector and mirror-to-mirror differences. If the degradation change of the mirror (RVS) is not uniform across all angles and among detectors, then there will be detector-to-detector difference in L1B products.
  - Instrument inter-comparison.
    - AVHRR to track consistency and bias between Terra and Aqua. Need lots of data.
    - MISR to track mirror side difference for Terra MODIS.
    - AIRS for Aqua MODIS long-term trending. We have been checking for consistency at typical scene level (e.g. 300K for B31) in the past. But there is few degrees difference at the very low temperature range.

Item 4: Terra RSB RVS issue discussion (Jack)

- Page 4 shows the RSB gain trending from SD, SRCA, and Moon at three different AOI. The SRCA angle is same as the nadir, sitting between SD and Moon. The Terra SRCA trending stops at about day 1800 because of lamp problem. After that, we reduced the SRCA activity and have less data input for the RVS. The Aqua SRCA data was never used in the RVS derivation.
- Page 5 is 5-year detector difference trending (ratios of d1/d10 and d2/d9) for mirror side 1 and side 2. The charts show that the gain could change differently on different detectors. However, the magnitude is different in mirror side 2 (for example, B8), meaning the mirror reflectance changes differently between two mirror sides in along-track direction. If that's the case, how confident we are in the RVS change (along-scan direction)? These PV detectors are built the same, only the filters are different for different bands.

  GM – On page 5, the difference in mirror sides for B8 is about 1%. Do we see this in the lunar data?

  JX – We are looking into that too. After MsWG, we will meet with Oceans group for the first meeting on RVS issue.

Around the Table

Participant: **Chris Moeller (Atmosphere)**

We continue to look at the instrument bias for Terra MOD06, which shows some interesting results. Aqua is already using this method in collection 5. Terra MODIS has more challenging issues than Aqua and there is no AIRS onboard Terra. Historically, it introduced some inconsistency when we used B34 data of Terra. We are looking the aircraft data trying to bring back some useful Terra B34 data if we want to use MOD06.

I also received MCST (Weiwei) recent SWIR data. I'll take a look later.

Next MsWG meeting scheduled on March 8, 2006